Remarks on Flap Extraction; with a Table of One Hundred Consecutive Cases Operated on, November, 1898—1900.

BY

JAMES KERR, M.A., M.D.CANTAB., D.P.H.

Honorary Surgeon, Bradford Eye and Ear Hospital

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REMARKS ON FLAP EXTRACTION,

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OPERATION for cataract is one of the oldest surgical proceedings described. The cataract was supposed to be something that had descended from the brain to the eye. Albucasis, whose works were first made accessible in a Latin translation published at the Moorish Press of Toledo in 1528, has a chapter headed "De cura aqua, quæ descendit in oculo, vel cataracta." About the beginning of the Christian era the operation of couching, or depression of this effusion, was so fully gone into by Celsus in a chapter "De suffusione," that Boerhaave in his book on diseases of the eye, speaking of this chapter, writes: "Enim hanc operationem tam exacte descripsit, ut hodie nihil possit," pointing out also that it had come, as Celsus describes, from Egypt, where probably there had been no material change for three or four thousand years.

In the "Worthy Treatise of the hundred and thirteen diseases of the Eye," written by Jacques Guillemeau,[1] the colleague, and in 1590 successor, of Ambrose Pare, the detailed directions as to bleeding and diet before and after the operation are exactly those of the text-books of the fifties, and the times selected for the operation remained, too, pretty much as given in "Banister's Breviary of the Eyes," where the old Elizabethan surgeon drops into verse with rules somewhat similar to those many members of our profession still remember as holding in their student days :—

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[1] The books quoted are in the Library of the Bradford Eye and Ear Hospital.

The fit time for couch
of Cataracts.

Couch Cataracts upon
a day so faire,
That neither wind nor
clouds disturbe the Ayre,
When spring with simples
fils the Earths rich lap,
Or Autumne makes
the tree put off his cap,
The Moon i'th full,
or in coniunction sly,
Or tracing Aries,
or in Gemini.

The first scientific work in a modern sense is that of Brisseau of Tournay, who in 1709 published his "Traité de la Cataracte et du Glaucoma," wherein is set forth the nature and structure of cataract as demonstrated in 1706. Soon after, Morgagni in the classical work "De Sedibus et Causis morborum," definitely sets down ordinary cataract as due to a drying up of the lens in its capsule.

The pathological discoveries regarding cataract led the way for Daviel, who about 1750 introduced extraction. Extraction with a downward flap was done in Persia in the fourth century, and is referred to by Avicenna, the great physician who was born at Sarmacand in the year A.D. 801, and whose writings became the canon of medical knowledge and almost crystallised it for the best part of a thousand years. Rhazes, the describer of smallpox in the ninth century, also mentions flap extraction, but other methods were probably tried, for as Guillemeau in his "Worthy Treatise" says :—

> “*Albucraſis* doth vvrite, that it vvas reported in his time, one had deuiſed to picke the eye with an hollovve needle, and by the hollowneſſe of it hee coulde rayſe vp and dravve foorth the humour of the cataract,

—a proceeding not again practised until tried by Mr. Teale some seven or eight centuries later. Extraction, when introduced by Daviel, did not replace the older method. Scarpa, one of the great supporters of extraction against Pott, Hey and others, who always did couching, at last in 1806 wrote that his observation and experience show that extraction has to be abandoned for depression—and with few exceptions the able surgeons in the first half of the Nineteenth Century seem to have started enthusiastically as supporters of extraction, but ended by practising the older method of depression. About 1860 spoon methods came in, and in 1865 von Graefe introduced his linear section with iridectomy.

Aseptic surgery has now made flap extraction so safe that, whilst to judge from old hospital statistics about one-third of the **Results.** cases used to be deemed unfit for operation, nearly all can now be operated on with advantage. Owing to this increase in the number and variety of cases dealt with, the great improvement in results attained from extractions does not show very markedly. In earlier days the results are displayed by the numerous works written on artificial pupil. At the beginning of the century about two out of five represented the high-water mark of success, which in the thirties became about five out of nine, and in the fifties Mackenzie estimates that in the hands of a skilled ophthalmic surgeon three-quarters should get good and two-thirds excellent results. In the nineties Hermann Knapp, of New York, from his own extensive experience puts for uncomplicated cases 3 per cent. failure, moderate result 7 per cent. and good result 90 per cent. Suppuration, the great fear of earlier surgeons, is now so rare that I have never seen it as a result of the operation.

The prognosis as to the relief of cataract blindness by operation depends chiefly on the condition of the eye. In **Prognosis.** complicated cases the chances are against more than fair vision being obtained, in uncomplicated cases normal vision is to be expected.

While formerly the operator was all important, and the Hippocratic aphorism that "inexperience is a bad treasure" always holds, yet the personal equation has enormously diminished in its importance. Writers from Celsus down to Brudenell Carter have insisted on ambidexterity—the last says that no man should attempt to become an ophthalmic surgeon without this accomplishment—yet although ambidextrous and by preference invariably using the left hand for the left corneal section, one feels safe in saying that the spring speculum, fixation forceps and cocaine must have discounted the value of this qualification too.

The hundred consecutive cases noted in this paper were flap extractions for senile cataract except one case in a woman of 42, who had had the lens needled for high myopia.

The operations were done in November, 1898, to November, 1900. Cocaine was the anæsthetic used in all but six cases where a general anæsthetic was required, twice in extremely complicated cases, once where sneezing was induced whenever the cornea was exposed to strong light, and in three purely nervous individuals. Of these hundred eyes in seventy-six patients, 33 eyes—one-third of the number—were so complicated that the result was affected by previous disease. In 67 eyes of fifty-three patients the cataract was uncomplicated by disease. Where both eyes have been operated on the result has been practically identical in each. Twenty-five patients with uncomplicated cataracts had operations in both, in 10 cases both operations are in this series. Two cases should perhaps be excluded, as in one whilst normal vision was obtained, the other eye was a squinter and amblyopic *ab initio*; the second, a case of high myopia, had flap extraction with V. = $\frac{5}{18}$ in one and linear extraction with a similar result in the other. The remaining twenty-three patients, two got results of $_5$ and $\frac{5}{18}$ respectively, and the rest normal near vision J_1, and distant vision some $\frac{5}{9}$, but mostly $\frac{5}{6}$.

Previous Condition of Eye.

Of the complicated cases twelve had both eyes operated on, with very similar results in each of the eyes, but from the variety of conditions not to be stated quantitatively; for instance, one with almost porcellaneous opacities of the cornea was enabled to see sufficiently to walk about without help, with either eye, another also with corneal opacities without distinguishing any of the test letters, could again do his work as a stoker. Evidently the previous condition of the eyes is the chief factor in the final result.

Operation.

The extractions were generally done after a preliminary iridectomy, five or six weeks intervening. An upward incision, nearly in the corneal margin, with a good conjunctival flap was generally used. Twice the incision was down and in, to extract through an optical iridectomy, once simply down. A peripheral incision of the lens capsule was always made, and as a rule a vertical tear across afterwards. A cotton wool pad is placed on the eye and kept in position by a couple of strips of strapping, a wire gauze protector is put over all, and the patient kept in bed from four to seven or more days.

In sixteen selected cases simple extraction without any iridectomy was done; one, the case of high myopia, had a prolapse of iris, and after three weeks iridectomy, getting V. = $\frac{5}{18}$; another done under general anæsthetic for nervousness had iridectomy done before being sent back to the ward, as the pupil was not round and prolapse was feared. The remaining fourteen all got excellent vision, being able to read diamond type, and having in four cases distant V. = $\frac{5}{9}$ and in ten cases V. = $\frac{5}{6}$.

Of the fifty-two other uncomplicated cases five never returned to be tested; two with V. = $\frac{5}{18}$ were satisfied and refused a needling, which would probably have given normal vision; two in the same patient could not be got better than $\frac{5}{18}$; one patient got $\frac{5}{12}$ and $\frac{5}{18}$; ten got $\frac{5}{9}$, and twenty-nine $\frac{5}{6}$ as the last recorded vision, but probably more would have come to this if followed up. If we take Knapp's classification, all the uncomplicated cases, whether operated on with or without iridectomy, got good vision.

One-third the total number make up the number of complicated cases set forth in full detail in the table. The result here cannot be displayed quantitatively as it is entirely a matter of selection.

We should operate on any cataract which renders the patient blind, unless the tension is minus.

Of doubtful cases are two, where there was almost porcellaneous opacities in one and very great opacity in the other, so that the pupil could not be seen. They were both operated on: one got the ability of walking about in the street unaided, the other returned to his work as a stoker. In another case, with perception of light and probably atrophy, both were operated on with excellent optical, but no visual, result.

Complications.

In one hundred extractions *loss of vitreous* occurred five times, all complicated cases; four times without escape, it showed in such a manner that it was noted—three of these were immature cataract. None of the four cases noted with fluid vitreous and floaters had any prolapse.

Noteworthy *hæmorrhage* occurred twice in simple extractions, filling the anterior chamber, but ultimate vision was normal; once continuous bleeding from the flap, with normal vision; another repeated hyphæma going on for three weeks, at last calcium chloride was used freely, and ultimately this patient also got normal vision. Three times it occurred in old glaucomatous cases, in one of which the wound was kept repeatedly gaping for many hours, but which ultimately came to $V. = \frac{5}{24}$. So that hæmorrhage does not seem to unfavourably influence the visual result.

There was also noted *collapsed cornea* in eight cases, *albuminuria* in seven patients, with ten extractions, *low specific gravity* of urine—1005 or less—without albuminuria in four others, and *diabetes* in one, all of whom did well.

Two cases may be mentioned as curiosities: the one who sneezed when strong light fell on the cornea, and who even sneezed during his second operation when under chloroform, and one who, possibly as a sequel, had herpes of the forehead and eyebrows on the same side, with pitted scars during convalescence.

Old iritis, glaucoma, sometimes with *myopia and fluid vitreous* concomitant, form a symptom complex which is a frequent precursor of cataract, the operative results being very doubtful as to good vision. Five cases had had *optical iridectomy* previously, and a similar number *iridectomy for glaucoma. Synechiæ* several times caused trouble during the operation, and in one case after extraction scissors had to be used to free the lens. Three times the vectis had to be used to bring out the lens, in one case, however, it was dislocated previously. In six cases *traumatic causes* were assigned for the cataract, but apart from the history they were uncomplicated, and four cases with only one eye functional were operated on. The uncomplicated cases which have required most care, and often fallen short of normal distant vision, have been cases where operation has been done early owing to the necessity for getting to work. This should not be done, if the best visual result is to be attained, until the acuity has fallen to counting fingers at a metre. Artificial maturation tried in three cases, and even a preliminary needling in one, were disappointing; preliminary iridectomy was always done in immature cases.

Conclusion.

In a ripe cataract simple extraction is the ideal operation. Without much fear of prolapse of iris, it may be expected to give rapid and excellent results, and the method of doing this is practically the original method started with a century and a half ago. To anyone beginning the practice of cataract extraction wishing to learn its dangers and risks, there is more to be got out of the writings of sixty or seventy years ago than from the literature of the last five. Every possible combination and variety of incision, and knife and needle, has been tried. The spring speculum and cocaine has lessened the surgeon's need to gain by long practice and from many failures an extraordinary dexterity almost amounting to sleight of hand, and we have come back to the starting-point—simple flap extraction; but having learned the sterilising power of heat, and that salvation lies in cleanliness, a uniformity of results is obtained that could scarcely have been dreamed of by the great masters of the past.

ONE HUNDRED CONSECUTIVE FLAP EXTRACTIONS, 1898—1900.

No.	Sex. Age.	Eye.	Initials. Residence.	Condition of Eye.	Condition of Patient.	Operation.	Complications.	Immediate Result.	Secondary Operation.	Ultimate Result.	Remarks.
1	F. 58	R. 1	E. B., Huddersfield	V. = p.l. poor projection outer half of V.F.	Good	Extraction after prel. iridectomy	None	$\frac{5}{60}$	None	$\frac{5}{6}$ J_2	L. ext. later, $\frac{5}{6}$ and J_1 also
2	F. 51	L. 1	E. B., Shipley	Old iritis lymph on capsule, and synechiæ	Shaky and feeble	Extraction after prel. iridectomy	None	$\frac{5}{36}$	Requires needling	—	Not seen again
3	F. 44	L. 1	S. A. D., Idle	Calcareous patches on capsule	Good	Extraction after prel. iridectomy	Dense capsule remained	P. l.	Discission	—	Not seen, dead
4	M. 72	L. 1	J. S., Skipton	$V. = \frac{0{\cdot}5 \text{ metre}}{\text{fingers}}$ good	Senile, albuminuria sp. gr. 1004	Extraction after prel. iridectomy	None	$< \frac{5}{60}$	Discission	$\frac{5}{6}$ J_1	
5	F. 53	L. 1	A. L., Ravensthorpe	V. = shadows slight divergent squint	Good	Extraction after prel. iridectomy	None	$\frac{5}{36}$	Discission	$\frac{5}{9}$ —	See also No. 96
6	M. 52	R. 1	J. H., Mirfield	$V. = \frac{0{\cdot}5 \text{ metre}}{\text{fingers}}$	Good	Extraction after prel. iridectomy	Small bridge left in prel. iridectomy	$\frac{5}{18}$	None	$\frac{5}{6}$ J_1	See also No. 63
7	M. 56	R. 2	J. C., Bradford	Good	Good	Extraction after prel. iridectomy	None	$\frac{5}{18}$	None	$\frac{5}{6}$ J_1	
8	F. 67	L. 1	M. C., Lockwood	Both discs deeply cupped from old glaucoma	Appears to have acromegaly	Extraction after prel. iridectomy	Much bleeding, collapsed cornea	$\frac{5}{60}$	Discission	$\frac{5}{24}$ J_{12}	
9	F. 65	L. 2	M. B., Bradford	Old glaucoma	Fair	Extraction after prel. iridectomy	Bead of vitreous lost, striate keratitis, some subsequent iritis	$< \frac{5}{60}$	Discission	$\frac{5}{18}$ —	
10	F. 42	L. 1	S. A. J., Farsley	Myopia = − 22 D., fluid vitreous and choroiditis	Good	Simple extraction after a discission of anterior capsule	Slight prolapse of iris	$\frac{5}{60}$	Snipping of tag of iris three weeks later	$\frac{5}{18}$ —	R. treated by linear extract. $V. = \frac{5}{18}$
11	F. 64	L. 1	M. A. S., Linthwaite	Good	Good	Ordinary extraction after prel. iridect.	Troublesome cough	$\frac{5}{18}$	Needled	$\frac{5}{9}$ J_1	
12	M. 64	L. 1	A. J., Bowling	Acute glaucoma 3 days	Good	Ordinary operation after prel. iridect.	None	$\frac{\text{metre}}{\text{fingers}}$	Discission	$\frac{5}{6}$ J_4	R. No. 47, V. = $\frac{5}{6}$ & J_1 also
13	M. 54	L. 1	W. B., Sowerby Bridge	V. = p.l., projection not good. Squinting eye	Good	Ordinary operation after prel. iridect., $CHCl_3$ given	Exceedingly nervous; vitreous threatened; much cortex left	$\frac{\text{metre}}{\text{fingers}}$	Clear pupil	$\frac{3 \text{ m.}}{\text{fingers}}$	Amblyopic eye; squinted all his life

14	F. 67	R. 2	S. W., Bradford	Much pigment on capsule. (Over 12 months under a quack.)	Good	Ordinary operation after prel. iridect.	None	$<\frac{5}{60}$	Discission	$\frac{6}{9}$ —	Occasional diplopia
15	M. 76	L. 2	J. T., Bradford	Dim five years	Fair	Ordinary operation after prel. iridect.	None	—	—	$\frac{5}{9}$ —	
16	M. 57	R. 1	W. S., Shipley	Injury nine months before	Good	Patient squeezed vitreous out on completion of section	$CHCl_3$ given, and lens removed with vectis	Eye quiet	None	$<\frac{5}{60}$ —	Not seen again
17	M. 44	L. 1	J. S., Steeton	Post. polar. cataract, large floaters and only p. l.	Good	Extraction after prelim. iridect.	Bead of vitreous lost	$\frac{2\cdot5 \text{ m.}}{\text{fingers}}$	None. Much capsule and large vitreous floaters	$<\frac{5}{60}$ —	R., No. 81
18	M. 46	L. 2	J. H., Clifton	Good	Senile, falsetto voice, thin rough skin, hairless	Extraction after prelim. iridect.	None	—	Still thin, calcareous-looking capsule	$\frac{5}{18}$ —	R. ext. six years before. R.V. $=\frac{5}{18}$
19	F. 59	R. 1	M. B., Bradford	V. = p. l.	"Rheumatics" exceedingly bad	Extraction after prelim. iridect.	None	$\frac{5}{18}$	—	—	Not seen again
20	M. 71	R. 1	I. G., Bradford	Synechiæ and old iritis	Very shaky	Extraction after prelim. iridect.	Adhesions of iris to lens; had to be cut with scissors.	$\frac{5}{9}$ (?)	No scholar; counts letters	$<\frac{5}{60}$(?)—	A year later. T. = −1.· L. eye, No. 31
21	F. 72	R. 1	M. R., Keighley	Fair projection, but only p. l.	Urine no alb., sp. gr. 1004	Extraction after prelim. iridect.	Small tag of iris prolapsed inner angle of incision.	$\frac{5}{60}$	None	$\frac{5}{18}$ —	L., No. 25
22	F. 75	R. 1	A. C., Birkenshaw	Neuralgic pain for six months; oval, irregular pupils.	Good	Extraction after prel. iridectomy	None	P. l.	Needled	$\frac{6}{18}$ —	Macular choroiditis
23	M. 69	R. 1	J. P., Bradford	Old diffused, calcified corneal opacities; pupils not visible	Albuminuria	Extraction lens not visible till removed	None	More light	Needled by guess	$\frac{\text{1 metre}}{\text{shadows}}$	Vision much improved; can go about the town alone now
24	M. 69	L. 2	J. P., Bradford	Optical iridectomy both 15 years ago	Sp. gr. 1005	Extraction flap down and in	Calcareous lens adherent to iris removed	More light	Needled by guess	$\frac{\text{1 metre}}{\text{shadows}}$	R., No. 21; not seen since
25	F. 72	L. 2	M. R., Keighley	Good projection	Urine non-albuminous; sp. gr. 1004	Ordinary operation after prel. iridectomy	None	$<\frac{5}{60}$	None	$\frac{5}{18}$ —	L., No. 30
26	M. 60	R. 1	D. T., Huddersfield	Many corneal opacities from injuries at work. Sneezes in bright light	Good	Ordinary operation after prel. iridectomy	Sneezed during operation, with loss of bead of vitreous	Fingers	—	Can now do his work	L., No. 72
27	M. 74	R. 1	J. H., Wyke	M. = −7.0D. Large floaters; deep cupping from old glaucoma	Senile	Ordinary operation after prel. iridectomy	Upon third day, owing to "bladder," had syncopal attack with face drawn to left	$\frac{5}{36}$	Needled	$\frac{5}{24}$ —	

ONE HUNDRED CONSECUTIVE FLAP EXTRACTIONS, 1898—1900.—*Contd.*

No.	Sex. Age.	Eye.	Initials. Residence.	Condition of Eye.	Condition of Patient.	Operation.	Complications.	Immediate Result.	Secondary Operation.	Ultimate Result.	Remarks.
28	F. 71	L. 1	H. K., Liversedge	Old iritis and atrophic-looking disc	Poor	Ordinary operation after prel. iridectomy	Collapsed cornea	$< \frac{5}{60}$	None	Sta. quo	R. Retinitis proliferans
29	F. 55	R. 2	E. R., Farsley	Mucocele	Good	Simple extraction	Small peripheral button-hole in iris	$\frac{5}{18}$	None	$\frac{5}{6}$ J_1	
30	M. 60	L. 2	D. T., Huddersfield	Opaque cornea and sneezing. (See No. 26)	Good	$CHCl_3$. Extract. after prel. iridectomy	Knife removed during incision, owing to sneezing whilst under $CHCl_3$, but operation completed without accident	Fingers	—	—	"Can again do a good day's work." R., No. 26
31	M. 60	L. 2	I. G., Bradford	Old iritis, p. l., tremulous iris	Poor	Extraction with vectis	Dislocated lens	$\frac{\text{Metre}}{\text{fingers}}$	—	Fingers	T. = −1. R., No. 20
32	M. 66	L. 1	W. C., Bradford	Good	Good	Ordinary extraction after prel. irid.	None	$\frac{5}{24}$	Discission	$\frac{5}{6}$ J_1	
33	F. 32	L. 1	M. A. I., Saltaire	Shuttle accident some years before	Neurotic. Attacks of aphonia	Ordinary extraction after prel. irid.	None	$\frac{5}{18}$	Discission	$\frac{5}{12}$ —	Herpetic eruption about eyebrow and forehead with deep scarring during convalescence
34	M. 50	L. 1	R. L., Thornhill	Milky, soft-looking cataract; no synechiæ	Good	Ordinary extraction after prel. irid.	None	Clear pupil	None	P. l.	Atrophic disc. R., No. 44
35	M. 46	R. 1	J. G., Batley	Good	Smokes ℥iii. twist weekly	Ordinary extraction after prel. irid.	None	$\frac{5}{60}$	None	$\frac{5}{12}$ —	L., No. 41
36	M. 48	R. 1	J. B., Wyke	Good	Good	Simple extraction	None	$\frac{\text{5 m.}}{\text{fingers}}$	None	$\frac{5}{6}$ J_1	L., No. 45
37	F. 65	R. 1	B. D., Bradford	Good	Good	Extraction after prel. iridectomy	Striate keratitis	$\frac{5}{18}$	Discission	$\frac{5}{6}$ J_1	
38	F. 63	L. 1	S. A., Dewsbury	Good	Good	Extraction after prel. iridectomy	None	$\frac{5}{18}$	Discission	$\frac{5}{6}$ J_1	R., No. 78
39	F. 42	R. 1	M. J. W., Keighley	M. = −6.0D.	Good	Extraction after prel. iridectomy	Cystoid cicatrix	$< \frac{5}{60}$	None	$\frac{5}{24}$ —	Capsule should yet be needled
40	F. 67	L. 1	H. C., Yeadon	Corneal nebulæ	Albuminuria	Extraction after prel. iridect. Arti-	Collapsed cornea	$\frac{5}{36}$	None	$\frac{5}{18}$ —	Nebulæ

41	M. 46	L. 2	J. G., Batley	Squinting eye; has never seen well	Good	Ordinary operation after prel. iridectomy	Some prolapse of vitreous	P. l.	None	P. l.	Amblyopic eye. R., No. 35
42	F. 42	L. 1	R. B., Bradford	V<$\frac{5}{60}$, but very immature cataract	Good	Ordinary operation after prel. iridectomy	Much cortex left	$\frac{5}{36}$	Discission	$\frac{5}{9}$ —	R., No. 107
43	F. 54	R. 1	H. M. B., Sowerby Bridge	Immature; V. $\frac{5}{36}$	Good	Ordinary operation after prel. iridectomy	None	Shadows	Discission	$\frac{5}{6}$ J_1	L., No. 56
44	M. 50	R. 2	R. L., Thornhill	Occluded pupil; optical iridectomy	Good	Extraction down and in with large conjugation flap	Hyphæma after a knock in washing	Shadows	None; clear pupil got	P. l.	Optic atrophy. L., No. 34
45	M. 48	L. 2	J. B., Wyke	Good	Good.	Extraction after prel. iridectomy	None	$\frac{5}{12}$	None	$\frac{5}{6}$ J_1	R., No. 36
46	F. 61	R. 1	G. S., Denholme	Nebulæ both corneæ	Good	Extraction after prel. iridectomy	None	$\frac{5}{36}$	Discission	$\frac{5}{18}$ —	Hazy cornea
47	M. 64	R. 2	A. J., Bowling	Good	Good	Extraction after prel. iridectomy	Collapsed cornea	$\frac{5}{36}$	None	$\frac{5}{5}$ J_1	L., No. 15
48	F. 69	L. 1	J. W., Keighley	Black cataract	Feeble	Extraction after prel. iridectomy	Delirious even when up	$\frac{\text{Metre}}{\text{fingers}}$	Discission	$\frac{5}{36}$ —	Not seen since
49	F. 56	L. 1	M. A. S., Bradford	Exophthalmos	Fair	Extraction after prel. iridectomy	Wound kept open long	$\frac{5}{12}$	Needled	$\frac{5}{6}$ J_1	R., No. 57
50	M. 65	L. 1	M. S., Bradford	Good	Albuminuria casts; sp. gr. 1005	Extraction after prel. iridectomy	Striate keratitis	$\frac{5}{18}$	None	$\frac{5}{6}$ —	Illiterate
51	M. 65	R. 2	M. S., Bradford	Good	Albuminuria casts; sp. gr. 1005	Extraction after prel. iridectomy	None	$\frac{5}{12}$	None	$\frac{5}{6}$ —	Illiterate
52	F. 45	L. 1	M. W., Bradford	Good	Good	Extraction after prel. iridectomy	Capsular bag with cortex remained	$\frac{5}{24}$	Discission twice	$\frac{5}{6}$ J_1	
53	F. 54	R. 1	M. R., Pudsey	Pupil not round	Fair	Extraction after prel. iridectomy	None	$\frac{\text{0·5 m.}}{\text{fingers}}$	Discission twice	$\frac{5}{6}$ J_1	
54	M. 66	R. 1	S. D., Windhill	Good	Paralysis agitans	Simple extraction	None	$\frac{5}{60}$	Discission thrice	$\frac{5}{6}$ J_1	L., No. 58
55	M. 63	L. 1	J. H., Clayton	Old iritis, occluded pupil. Anterior and posterior synechiæ	Facial paresis R. side; urine sp. gr. 1005; no albumen	Optical iridectomy, then extraction	Much reaction; difficulty with adhesions	P. l.	Discission twice	$\frac{5}{24}$ —	R. lost years before
56	F. 54	L. 2	H. M. B., Sowerby Bridge	Immature	Good	Extraction after prel. iridectomy	Some cortex left	$\frac{\text{2 m.}}{\text{fingers}}$	Discission	$\frac{5}{6}$ J_1	R., No. 43
57	F. 56	R. 1	M. A. S., Bradford	Pain and tenderness of eye for some months	Good	Extraction after prel. iridectomy	A. c. did not refill for several days	$\frac{5}{24}$	None	$\frac{5}{6}$ J_1	L., No. 49

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ONE HUNDRED CONSECUTIVE FLAP EXTRACTIONS, 1898—1900.—*Contd.*

No.	Sex. Age.	Eye.	Initials. Residence.	Condition of Eye.	Condition of Patient.	Operation.	Complications.	Immediate Result.	Secondary Operation.	Ultimate Result.	Remarks.
58	M. 66	L. 2	S. D., Windhill	Good	Paralysis agitans	Simple extraction with conjugated flap	Much bleeding from flap	Shadows	Discission twice	$\frac{5}{6}$ J_1	R., No. 54
59	F. 66	L. 1	H. L., Bradford	Myopic astigmatism; good	Good	Extraction after prel. iridectomy	None	$\frac{5}{60}$	Needled	$\frac{5}{6}$ J_1	
60	M. 61	L. 1	J. B., Oxenhope	20 years blind	Good	Simple extraction	Striate keratitis	$\frac{2\text{ m.}}{\text{fingers}}$	None	$\frac{5}{6}$ J_1	
61	M. 53	L. 1	J. P., Bowling	Traumatic; seven months; pupil dilated and fixed	Good	Extraction after prel. iridectomy	Collapsed cornea; adhesions torn by cystitome	$\frac{5}{36}$	None	$\frac{5}{9}$ J_1	
62	F. 75	L. 1	A. G., Ripon	Barely p. l. iritis; glaucoma. No direct light reflex. Morgagnian	Fair	Extraction after prel. iridectomy	None	Shadows	None	$\frac{\text{3 metres}}{\text{fingers}}$	R., No. 64
63	M. 52	L. 2	J. H., Mirfield	Good	Good	Extraction; a narrow iridectomy at same time with knife	A. c. half filled with blood next morning	$\frac{5}{60}$	None	$\frac{5}{9}$ J_1	R., No. 6; not seen again
64	F. 75	R. 2	A. G., Ripon	P. l Old glaucoma and iritis	Fair	Extraction after prel. iridectomy	None	$\frac{5}{60}$	Discission	$\frac{5}{24}$ J_6	L., No. 62
65	F. 51	L. 1	G. W., Hebden Bridge	Shadows; good	Albuminuria	Simple extraction	None	$\frac{5}{12}$	None	$\frac{5}{6}$ J_1	
66	F. 69	L. 1	R. R., Huddersfield	Myopia; glaucoma: macular choroiditis	Fair	Extraction after prel. iridectomy	Hæmorrhage kept gaping wound for many hours	Fingers	Needled twice	$\frac{5}{24}$ —	R., No. 94
67	M. 58	L. 1	W. S., Keighley	Good	Good; urine sp. gr. 1006; non-albuminous	Simple extraction	None	$\frac{5}{18}$	None	$\frac{5}{6}$ J_1	
68	M. 46	R. 1	G. M., Bradford	Sympathetic eye; four years' trouble; now blind	Good	Optical iridectomy, and later extraction down and in	Lens adhesions caused much trouble	Shadows	None	Shadows	L., lost by injury
69	F. 63	R. 1	I. A., Lowmoor	Good	Post. hemiplegic; facial spasms	Extraction after prel. iridectomy and artificial maturation	None	Fingers	Discission	$\frac{5}{9}$ J_1	
70	M. 86	L. 1	E. F., Skipton	℥ss tobacco smoked daily	Fair	Extraction after prel. iridectomy	None	Débris	Needled	" Done very well "	Not seen again